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THE RESOURCE CURSE WITHOUT NATURAL RESOURCES: EXPECTATIONS OF RESOURCE BOOMS AND THEIR IMPACT

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ABSTRACT

Many resource-rich countries have experienced a range of negative economic and political effects from natural resource extraction, often lumped together as the ‘resource curse’. This article investigates to what extent expectations of future natural resource booms in São Tomé e Príncipe and Madagascar led to ‘resource curse’ effects, even though these countries did not experience the expected booms. It finds that both countries experienced resource curse effects as a result of future expectations, including volatile economic growth and eroded governance. The article demonstrates that shared aspirations and expectations alone may make for material political and economic outcomes even when they become visibly divorced from reality. Thus, there is much more to resource curse effects than simply the product of the material extraction of natural endowments. At a time of extremely volatile prices for primary commodities, and the relatively easy availability of investment capital and credit to support speculative ventures that in turn incentivize resource hype, it is likely that a growing number of countries may suffer the malign effects of a resource curse without natural resource extraction.

MANY RESOURCE-RICH COUNTRIES have experienced a range of negative economic and political effects of resource extraction, often lumped together as the ‘resource curse’.¹ However, the resource curse literature

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1. Useful reviews are Jeffrey A. Frankel, ‘The natural resource curse: A survey’ (Working Paper 15836, National Bureau of Economic Research, Cambridge, MA, 2010); Frederick van der Ploeg, ‘Natural resources: Curse or blessing?’, *Journal of Economic Literature* 49 (2011), pp. 366–420; Michael L. Ross, ‘What have we learned about the resource curse?’ (Working Paper, University of California, Los Angeles, CA, 2014).

has failed almost entirely to consider possible resource curse effects in countries where preliminary planning or exploratory extractive work was carried out but ultimately no significant extraction of natural resources took place. This article investigates possible resource curse effects in countries where promised resource booms failed to materialize, looking at the cases of São Tomé e Príncipe (STP) and Madagascar.

Scholarship in economics strongly suggests that individuals act on the basis of rational future expectations and macro-level phenomena cannot be satisfactorily explained without taking into account rational expectations.² By extension, we hypothesize that political and economic decision makers in countries holding the promise of future extraction of natural resources would take rational decisions on the basis of an expectation of a resource boom – as would decision makers in countries where the extraction of natural resources actually takes place. Indeed, previous studies on countries such as Uganda and STP have demonstrated that the promise of a resource boom raised high expectations of potential future economic benefits among African and foreign decision makers that could be difficult to match in reality.³

The resource curse thesis suggests that countries with a high dependence on natural resources suffer from negative macroeconomic and macro-political effects.⁴ The resource curse thesis has been challenged.⁵ Indeed, some writers suggest that the effects are beneficial, particularly with regard to economic growth.⁶ In response to such critiques,

2. John F. Muth, 'Rational expectations and the theory of price movements', *Econometrica* 29 (1961), pp. 315–35; Robert E. Lucas Jr, 'Expectations and the neutrality of money', *Journal of Economic Theory* 4 (1972), pp. 102–24; Stanley Fischer (ed.), *Rational expectations and economic policy* (University of Chicago Press, Chicago, IL, 1980).

3. Richard Vokes, 'The politics of oil in Uganda', *African Affairs* 111, 443 (2012), pp. 303–14; Julius Kiiza, Lawrence Bategeka, and Sarah Ssewanyana, 'Righting resource-curse wrongs in Uganda: The political economy of oil discovery and the management of popular expectations', *Mawazo* 10, 3 (2011), pp. 183–203; Gisa Weszkalnys, 'Hope and oil: Expectations in São Tomé e Príncipe', *Review of African Political Economy* 35 (2008), pp. 473–82; Gisa Weszkalnys, 'Anticipating oil: The temporal politics of a disaster yet to come', *Sociological Review* 62, S1 (2014), pp. 211–35.

4. There are some differences of opinion as to which 'resources' contribute to the resource curse, but resource curse studies widely agree that oil, gas, and mineral resources are behind the resource curse, while most studies agree that agricultural resources do not have significant resource curse impacts. The empirical evidence of resource curse effects is most robust for oil and gas. Ross, 'What have we learned about the resource curse?'

5. Christa Brunnschweiler, 'Cursing the blessings? Natural resource abundance, institutions, and economic growth', *World Development* 36 (2008), pp. 399–419; Michael Alexeev and Robert Conrad, 'The elusive curse of oil', *Review of Economics and Statistics* 91 (2009), pp. 586–98.

6. Stephen Haber and Victor Menaldo, 'Do natural resources fuel authoritarianism? A reappraisal of the resource curse', *American Political Science Review* 105 (2001), pp. 1–26; Tiago V. de V. Cavalcanti, Kamiar Mohaddes, and Mehdi Raissi, 'Growth, development and natural resources: New evidence using a heterogeneous panel analysis', *Quarterly Review of Economics and Finance* 51 (2011), pp. 305–18; Brunnschweiler, 'Cursing the blessings?'; Alexeev and Conrad, 'The elusive curse of oil'.

proponents of the resource curse thesis shifted their attention to possible adverse political consequences.⁷ Other studies suggest that resource curse effects are subject to a number of contingencies, including the nature of governance (notably, democratic regimes are significantly less prone to such effects) and the resource type (notably, oil-producing countries are significantly more prone to such effects).⁸ Indeed, some countries such as Norway and Canada have evaded the resource curse to a large extent; it could be argued that this was due to better governance or already existing economic diversification.⁹ Hence the presence of resource curse effects, or their absence, arguably reflects relatively unique and complex sets of circumstances including *inter alia* the type of natural resources, the structure of the domestic economy, and the political and corporate governance regimes.¹⁰ More recently, scholars have re-examined the available statistical data, arguing that the previous findings on positive or insignificant effects of resource windfalls were contingent upon the panel of countries selected and the time period under review, and that occasionally the negative effects may have been underestimated.¹¹ In addition to the debates on economic and political effects, a third strand of the literature suggests that resource-rich countries are more prone to civil conflicts.¹² We shall briefly summarize these three aspects of the resource curse.

First, the inflow of resource revenues can lead to the so-called Dutch Disease phenomenon: the appreciation of a country's currency exchange rate, which can reduce exports of agricultural and manufacturing goods. While empirical evidence does not necessarily suggest that resource wealth leads to lower economic growth, the natural resource sectors can draw capital, labour, and entrepreneurial activity away from non-resource

7. Paul Collier, 'The political economy of natural resources', *Social Research* 77 (4) (2010), pp. 1105–32; Michael Ross, *The oil curse: How petroleum wealth shapes the development of nations* (Princeton University Press, Princeton, NJ, 2012).

8. Sambit Bhattacharya and Roland Hodler, 'Natural resources, democracy, and corruption', *European Economic Review* 54 (2010), pp. 608–21; Ross, 'What have we learned about the resource curse?'; Anne Boschini, Jan Pettersson and Jesper Roine, 'Resource curse or not: A question of appropriability', *Scandinavian Journal of Economics* 109 (2007), pp. 593–617; Ross, 'What have we learned about the resource curse?'

9. Halvor Mehlum, Karl Moene, and Ragnar Torvik, 'Institutions and the resource curse', *Economic Journal* 116, 508 (2006), pp. 1–20; James Robinson, Ragnar Torvik, and Thierry Verdier, 'Political foundations of the resource curse', *Journal of Development Economics* 79, 2 (2006), pp. 447–68.

10. Ross, *The oil curse*; Ross, 'What have we learned about the resource curse?'; Benjamin Smith, *Hard times in the land of plenty: Oil politics in Iran and Indonesia* (Cornell University Press, Ithaca, NY, 2007).

11. See Jørgen Andersen and Michael Ross, 'The big oil change: A closer look at the Haber-Menaldo analysis', *Comparative Political Studies* 47 (2014), pp. 993–1021; David Wiens, Paul Poast, and William Roberts Clark, 'The political resource curse: An empirical re-evaluation', *Political Research Quarterly* 67 (2014), pp. 783–94.

12. Ross, *The oil curse*; Kuntala Lahiri-Dutt, 'May God give us chaos, so that we can plunder: A critique of "resource curse" and conflict theories', *Development* 49, 3 (2006), pp. 14–21.

sectors and thereby stifle their development.¹³ Based on evidence from 41 resource-exporting countries during 1970–2006, a recent study suggests that, in response to one dollar of natural resource revenue, non-resource exports decrease by approximately 75 cents and imports increase by 25 cents, and that the windfall effect was most severe for countries with a large manufacturing sector.¹⁴

Second, the inflow of resource revenues can undermine good governance and the quality of institutions. Given their dependence on extractive revenues, governments in resource-rich countries have greater incentives to focus their efforts on political competition to capture resource rents and on patronage to pay off political supporters to stay in power, rather than on encouraging the creation of wealth by improving the quality of societal institutions.¹⁵ Empirical evidence strongly suggests *inter alia* that resource-rich countries tend to suffer from higher levels of corruption than non-resource rich countries, and that resource abundance helps autocratic regimes to remain in power.¹⁶

Third, resource revenues provide fewer incentives for human cooperation and tend to be less affected by violent conflicts than other economic sectors, as extractive firms can build the necessary infrastructure, provide their own security and – being enclave economies – rely less on local business linkages. At the same time, the prospects of gaining control over resource revenues may fuel the activities of rebel groups, potential coup leaders, and other violent forms of political opposition. Empirical evidence strongly suggests that the presence of natural resources significantly increases the threat of armed conflict, even if this impact is subject to a number of contingencies, among which the location of resources is

13. van der Ploeg, 'Natural resources: Curse or blessing?'; Kareem Ismail, 'The structural manifestation of the "Dutch Disease": The case of oil exporting countries' (Working Paper 10/103, International Monetary Fund, Washington, DC, 2010); Milan Brahmbhatt, Otaviano Canuto, and Ekaterina Vostroknutova, 'Dealing with Dutch Disease', Economic Premise 16 (World Bank, Washington, DC, 2010).

14. Torfinn Harding and Anthony J. Venables, 'The implications of natural resource exports for non-resource trade' (Research Paper 103, Oxford Centre for the Analysis of Resource Rich Economies, Oxford University, 2013).

15. Richard Auty, 'Patterns of rent-extraction and deployment in developing countries: Implications for governance, economic policy and performance', in George Mavrotas and Anthony Shorrocks (eds), *Advancing development: Core themes in global economics* (Palgrave, London, 2007), pp. 555–77; Robinson, Torvik, and Verdier, 'Political foundations of the resource curse'.

16. Andrea Petermann, Juan Ignacio Guzman, and John E. Tilton, 'Mining and corruption', *Resources Policy* 32 (2007), pp. 91–103; Ivar Kolstad and Tina Søreide, 'Corruption in natural resource management: Implications for policy makers', *Resources Policy* 34 (2009), pp. 214–26, p. 214; Joseph Wright, Erica Frantz, and Barbara Geddes, 'Oil and autocratic regime survival', *British Journal of Political Science* 45 (2015), pp. 287–306; Anar K. Ahmadov, 'Oil, democracy, and context: A meta-analysis', *Comparative Political Studies* 47 (2014), pp. 1238–67.

crucial.¹⁷ For example, if resources are located inside the actual conflict zone, a conflict can be significantly exacerbated, but this effect is likely to be slight if oil is found offshore.¹⁸

The few previous studies that addressed the effects of future expectations either based their conclusions on economic experiments and/or investigated a single issue related to the resource curse such as corruption or exchange rates. To our knowledge, no previous study has undertaken a comparative investigation of a range of resource curse effects issuing from future expectations in the absence of actual resource extraction. This article aims to fill the gap.

Our study suggests that societies may experience resource curse effects without necessarily experiencing genuine resource windfalls; rather, anticipation of future resources may lead to at least some of the adverse effects of the resource curse. In particular, we encountered negative effects in terms of political stability and quality of governance, and significantly greater macroeconomic volatility. Although we did not find much tangible evidence for enhanced levels of violent conflict, this study does highlight the corrosive effects of resource hype, at a time when extremely volatile prices for primary commodities and the relatively easy availability of investment capital and credit to support speculative ventures increase the scope for the negative effects of future expectations.

Expectations of resource booms in historical and temporal terms

The resource curse literature focuses on the impact of *actual* resource extraction, but the idea that *expectations* of future resource revenues may lead to negative macroeconomic effects should not come as a surprise to those familiar with history. For instance, in late-sixteenth-century Spain, the 'expectation of future mineral discoveries prompted factors of production to be diverted from export industries, such as fine wool and manufactures, and into the extraction and service industries associated with the silver trade'.¹⁹ Future expectations related to resource booms created property bubbles, as in the case of Australia in the late nineteenth century.²⁰

17. Paul Collier and Anke Hoeffler, 'On the economic causes of civil war', *Oxford Economic Papers* 50 (1998), pp. 563–73; Macartan Humphreys, 'Natural resources, conflict, and conflict resolution: Uncovering the mechanisms', *Journal of Conflict Resolution* 49 (2005), pp. 508–37.

18. Päivi Lujala, 'The spoils of nature: Armed civil conflict and rebel access to natural resources', *Journal of Peace Research* 47 (2010), pp. 15–28; Ross, 'What have we learned about the resource curse?'

19. Mauricio Drelichman and Hans-Joachim Voth, 'Institutions and the resource curse in early modern Spain', in Elhanan Helpman (ed.), *Institutions and economic performance* (Harvard University Press, Cambridge, MA, 2008), p. 134.

20. Geoffrey Blainey, *The rush that never ended: A history of Australian mining* (Melbourne University Press, Melbourne, 1963).

In accounting for the resource curse, some scholars have noted the role of expectations in aggravating its effects. Richard Auty pointed out that the neglect of non-resource sectors resulted 'in part from over-optimistic expectations for both mineral prices and RBI [resource-based industry] output'.²¹ Terry-Lynn Karl and Ian Gary asserted that 'oil booms raise expectations and increase appetites for spending' and that, as a result, 'governments dramatically increase public spending based on unrealistic revenue projections'.²² They also pointed out that 'the expectations created by oil riches and the reality produced is a dangerous formula for disorder and war'.²³

Several recent studies specifically explore the mechanisms by which expectations of a resource boom may lead to adverse economic and political outcomes. Pedro Vicente suggests that expectations of an oil boom can increase corruption and can lead to a change in the allocation of public resources.²⁴ Others argue that expectations of future resource revenues can cause economic effects such as changes in the real exchange rate.²⁵ Furthermore, unmatched expectations of higher personal incomes among the population can cause popular discontent and lead to societal conflicts.²⁶ This literature suggests that expectations of future resource booms can have different negative impacts on the economy, government policy, and violent conflict – even in the absence of the actual exploitation of natural resources. As Gisa Weszkalnys notes, 'occasionally, it is thought to be just the expectation of oil that causes the curse to happen'.²⁷

However, prior scholarship related to future expectations either based its conclusions on economic experiments and/or investigated a single issue related to the resource curse, such as corruption or exchange rates. To our knowledge, our study is the first to consider a range of resource curse effects deriving from future expectations in the absence of actual resource extraction.

21. Richard M. Auty, *Sustaining development in mineral economies: The resource curse thesis* (Routledge, London, 1993), p. 20.

22. Terry-Lynn Karl and Ian Gary, 'The global record', in *Foreign Policy in Focus* (Interhemispheric Resource Center/Institute for Policy Studies/SEEN, Washington, DC and Silver City, NM, 2004), pp. 35–42, p. 36.

23. Terry-Lynn Karl and Ian Gary, *Bottom of the barrel: Africa's oil boom and the poor* (Catholic Relief Services, Baltimore, MD, 2004), p. 18.

24. Pedro C. Vicente, 'Does oil corrupt? Evidence from a natural experiment in West Africa', *Journal of Development Economics* 92 (2010), pp. 28–38.

25. Aziz Hayat, Bahodir Ganiev, and Xueli Tang, 'Expectations of future income and real exchange rate movements', *Journal of Banking and Finance* 37 (2013), pp. 1274–85.

26. Gerhard Toews, 'Inflated expectations and natural resource booms: Evidence from Kazakhstan' (Research Paper 109, Oxford Centre for the Analysis of Resource Rich Economies, Oxford University, 2013).

27. Weszkalnys, 'Anticipating oil'.

Given that the resource curse has been a phenomenon noted for over twenty-five years,²⁸ why have the malign consequences of prospective, but not real, resource booms only become visible relatively recently? Is this because the impact of prospective resource booms has been so insignificant, or is it because the current theories that are used to explain the processes by which natural resources translate into different outcomes (such as rentier-type theories, or conflict theories) fail to conceptualize adequately the role of cognition and expectations? Consistent with recent contributions on expectations in resource-rich countries including STP and Madagascar,²⁹ we argue that – compared with the most popular current theories in the resource curse literature – theoretical insights on the link between natural resources and speculation/anticipation may provide superior explanations of the effects of resource boom expectations.

Many authors writing from the perspectives of economics, sociology, and other disciplines argue that speculation and anticipation are integral elements of decision making, which involves uncertainty and is shaped by future expectations.³⁰ Some writers point to the increased importance of economic speculation and anticipation in recent decades due to global economic shifts. In particular, Geoffrey Wood and Christel Lane argue that in historical terms we have experienced a long economic crisis since the early 1970s, a period of volatile and unstable growth interposed with recession, triggered by the oil shocks of the early 1970s and underlined by a long transition away from petroleum resources.³¹ They suggest that the high or volatile natural resource prices are accompanied by a greater availability of speculative capital (in the form of rentiers, sovereign wealth funds, and others), encouraging a greater amount of hype and gambling on future resource booms, drawing in or sidelining other players in a process of accumulation that has much to do with debt leverage and the inflating of the value of concessions, and little to do with material

28. For a consolidation of the early resource curse literature, see Richard Auty, 'Industrial policy reform in six large newly industrializing countries: The resource curse thesis', *World Development* 22, 1 (1994), pp. 11–26.

29. Weszkalnys, 'Anticipating oil'; Andrew Walsh, 'In the wake of things: Speculating in and about sapphires in northern Madagascar', *American Anthropologist* 106 (2004), pp. 225–37.

30. See, for example, Brian Kantor, 'Rational expectations and economic thought', *Journal of Economic Literature* 17 (1979), pp. 1422–41; Adeline Delavande, Xavier Giné, and David McKenzie, 'Measuring subjective expectations in developing countries: A critical review and new evidence', *Journal of Development Economics* 94 (2011), pp. 151–63; Vincanne Adams, Michelle Murphy, and Adele E. Clarke, 'Anticipation: Technoscience, life, affect, temporality', *Subjectivity* 28 (2009), pp. 246–65.

31. Geoffrey Wood and Christel Lane, 'Institutions, change and diversity', in Christel Lane and Geoffrey Wood (eds), *Capitalist diversity and diversity within capitalism* (Routledge, London, 2012), pp. 1–32; Christel Lane and Geoffrey Wood, 'Capitalist diversity: Work and employment relations', in Adrian Wilkinson, Geoffrey Wood, and Richard Deeg (eds), *Oxford handbook of employment relations: Comparative employment systems* (Oxford University Press, Oxford, 2014), pp. 156–72.

production. These effects have been accentuated particularly in the petroleum industry, with rising speculative activity and debt leverage.³² Following such analysis, the speculative long energy-transition thesis would be consistent with findings in the most recent literature that the negative effects of the resource curse have become more pronounced since the 1980s and that they are most pronounced in the petroleum sector.³³

However, structural changes in the global capitalist ecosystem represent only half of the picture. Bob Jessop argues that whilst there are dominant forces and pressures in the global capitalist ecosystem, there remains much variety within and between contexts. Each national and regional framework is associated with its own distinct forms of conflict and compromise; only in some circumstances does this lead to a 'spatial-temporal fix' associated with structural coherence in the national political economy.³⁴ As Weszkalnys notes, anticipation of resource windfalls can lead to the rapid development of new and not always coherent or well-designed regulatory structures, as well as undermine existing social ties and trust relations – which, in turn, would preclude the type of institutional alignment and coupling that would make stable growth possible.³⁵

Whether or not the reader is convinced by arguments of long energy transitions, it is evident that the global political economy has become a much more uncertain place, and that the intersection between global trends and not always coherent national institutional arrangements suggests great unpredictability.³⁶ Jane Guyer argues that bleak circumstances of 'enforced pessimism' encourage imagination, planning, and hoping about an abundant 'near future' of social and material prosperity, that encourages the leverage of debt and the selling of hope.³⁷ Vincanne Adams and colleagues conclude that anticipation represents the assumption that the boundaries of the possible have been extended, creating a sense of urgency among agents to leverage the new opportunities.³⁸ In different ways, these studies provide a conceptual arsenal that can be used to understand better the mechanisms through which mere future expectations of resource booms may translate into real world outcomes.

32. Richard Heinberg, *Snake oil: How fracking's false promise of plenty imperils our future* (Clairview, West Hoathly, 2014); Antonie Kotze, 'Debt, defaults and crises: A historical perspective' available at SSRN 2587342 (2015).

33. Andersen and Ross, 'The big oil change'; Ross, 'What have we learned about the resource curse?'

34. Bob Jessop, 'Rethinking the diversity and variability of capital', in Christel Lane and Geoffrey Wood (eds), *Capitalist diversity and diversity within capitalism* (Routledge, London, 2012), p. 216.

35. Weszkalnys, 'Anticipating oil'; Jessop, 'Rethinking the diversity and variability of capital'.

36. Jessop, 'Rethinking the diversity and variability of capital', p. 216.

37. Jane Guyer, 'Prophecy and the near future', *American Ethnologist* 34, 3 (2007), pp. 409–21.

38. Adams *et al.*, 'Anticipation'.

Resource boom expectations in STP and Madagascar

Before we begin analysing the impact of resource boom expectations, it is necessary to pinpoint the evolution of such expectations in both countries. In STP, resource boom expectations began around 1997 when the government signed an agreement with a small US firm ERHC to negotiate on its behalf with potential foreign investors for the award of oil licences. In 1998, the government and ERHC created a joint venture company, Sociedade Nacional de Petroleos de São Tomé e Príncipe (STPETRO), with a 51 percent government shareholding. STPETRO signed an agreement with the multinational Mobil (later ExxonMobil) to evaluate the oil and gas potential in the country's offshore area.³⁹ As Mobil set out to evaluate the country's geological potential over 18 months, the government negotiated the establishment of a Joint Development Zone in the most promising offshore area between STP and Nigeria to be jointly administered by the two countries; these negotiations were concluded in late 2000.⁴⁰ Therefore, the period from 1997 to 2000 can be assumed to mark the beginning of resource boom expectations in STP.⁴¹

In contrast to STP, there were at least two waves of resource boom expectation in Madagascar that related to different types of resources. In the mid- to late-1990s, Madagascar expected a resource boom in sapphires. In marked contrast to the oil sector in STP that required capital-intensive advanced technologies, sapphires in Madagascar were found in alluvial deposits and any person with a spade and simple tools was able to mine for sapphires. Hence, an artisanal sapphire mining rush took place: 'Rumours of sapphires the size of footballs and of fortunes made in a single day have made Ilakaka irresistible.'⁴² At the epicentre of the rush, the population of Ilakaka increased from 30 to roughly 100,000 during the period 1998 to 2000.⁴³ Meanwhile, the Malagasy government passed laws regulating natural resource exploitation in 1996 (petroleum) and 1999 (mining).⁴⁴ Therefore, the period from 1996 to 1999 marked the beginning of resource boom expectations in Madagascar.

39. Jędrzej George Frynas, Geoffrey Wood, and R. M. S. Soares de Oliveira, 'Business and politics in São Tomé e Príncipe: From cocoa monoculture to petro-state', *African Affairs* 102, 406 (2003), pp. 51–80.

40. *Ibid.*

41. See Gisa Weszkalnys, 'The curse of oil in the Gulf of Guinea', *African Affairs* 108, 433 (2009), pp. 679–89.

42. Rosaleen Duffy, 'Global environmental governance and the challenge of shadow states: The impact of illicit sapphire mining in Madagascar', *Development and Change* 36 (2005), pp. 825–43, p. 837.

43. 'Big hopes for Madagascan sapphires', *Financial Times* (18 August 2000).

44. *Madagascar: Nouvel eldorado des compagnies minières et pétrolières* (L'Association IRESA/Initiative pour la recherche économique et sociale en Afrique sub-saharienne et les Amis de la Terre France, Paris, November 2012).

The second notable wave of resource boom expectations in Madagascar arguably occurred after the 2002 political crisis following a disputed presidential election.⁴⁵ The country's new incumbent, President Marc Ravalomanana, ousted Didier Ratsiraka (President 1975–93 and 1997–2002), and initiated political and economic reforms that resulted in much greater support by foreign donors and a better investment climate for foreign investors. At the same time, foreign donors contributed to resource boom expectations by helping the Malagasy government to identify new potentially resource-rich areas. In 2003, the World Bank provided US\$32 million to Madagascar for managing the country's mineral resources. In 2004, USAID released a map that showed Madagascar's potentially rich gem areas in order to encourage the sale of prospecting licences to foreign mining companies.⁴⁶ Also in 2004, a US-registered company called Madagascar Oil was granted a petroleum exploration licence (the French oil firm Total became a partner in 2008). Over the following decade, the government awarded hundreds of mining licences covering a wide range of resources, including iron, nickel, cobalt, gold, ilmenite, bauxite, and uranium. Foreign direct investment stock in Madagascar's extractive sector increased from 47 billion to 5,800 billion ariary during the period 2005 to 2009.⁴⁷

In summary, great resource boom expectations began in parallel in the late 1990s in both countries. After a decade and a half, however, despite these expectations, in neither country has the extractive sector fulfilled its promise. In STP, no oil in commercial quantities has been found to date and oil production has not yet commenced. By 2013, the French oil multinational Total and the Swiss-based Addax Petroleum (a subsidiary of China's Sinopec) had abandoned four of six oil concession areas in the Joint Development Zone following disappointing oil exploration results, while two concessions in the Zone have never been developed at all.⁴⁸

In Madagascar, some mining activities have started: artisanal sapphire mining from the late 1990s, and an ilmenite mine owned by the Anglo-Australian mining firm Rio Tinto that began production in March 2009. However, the formal mining sector has had little impact on Madagascar's real economy since the 1990s. According to the International Monetary Fund (IMF), Madagascar's mining sector made up 0.6 percent of GDP in 2010, compared with 0.5 percent in 1995.⁴⁹ Even if we count the artisanal sector in the informal economy, the mining share of GDP was

45. On the 2002 political crisis, see Solofo Randrianja, "Be not afraid, only believe": Madagascar 2002', *African Affairs* 102, 407 (2003), pp. 309–29.

46. Duffy, 'Global environmental governance and the challenge of shadow states'.

47. *Madagascar: Nouvel eldorado des compagnies minières et pétrolières*.

48. 'São Tomé e Príncipe – Total loss', *Africa Confidential* 54 (19) (20 September 2013).

49. IMF, *Regional economic outlook: Sub-Saharan Africa* (IMF, Washington, DC, October 2012), p. 56.

estimated to be no more than 3 percent in 2005.⁵⁰ Artisanal mining had only limited impact on the rest of Malagasy society because almost all of the sapphires, rubies, and topaz extracted by illegal artisanal miners are believed to be exported tax-free outside the control of the Malagasy state.⁵¹ In comparison, the tertiary sector, the agricultural sector, and the manufacturing sector made up 53.9 percent, 28.4 percent, and 11.1 percent of Madagascar's GDP in 2010, respectively.⁵² The significance of natural resource extraction for Madagascar has remained limited. The sapphire boom in artisanal mining did not prove lasting, with sapphire production reportedly declining by the 2010s.⁵³ Commercial production from the large foreign-owned Ambatovy nickel mine started in 2014, but other projects have failed to materialize. Rio Tinto announced in early 2013 that it was scaling back its plans and would only operate one mine in Madagascar, rather than the scheduled three; by the end of 2013, Rio Tinto announced job losses at the remaining mine.⁵⁴ In 2015, the Ambatovy mine was hit by low nickel prices and was forced to lay off about 1,000 staff.⁵⁵ Indeed, the World Bank noted in 2010 that 'Madagascar will *possibly* enter the ranks of resource-rich economies over the next two decades'.⁵⁶

Therefore, we surmise that STP and Madagascar provide excellent case studies for investigating the impact of resource boom expectations in the absence of significant natural resource extraction, and the approximate 15-year period from about 1998 to 2013 provides the timeframe for our investigation.

Economic impact of resource boom expectations

Expectations of future resource booms can assume material forms, given that foreign investors are willing to pay handsomely for exploration rights even without any tangible proof that resources are commercially viable. Most notably, it is customary for extractive companies to pay signature bonuses for obtaining exploration licences from sovereign governments.

50. *The Economist*, 'Getting stoned – Madagascar' (30 July 2005).

51. 'Madagascar – Plunder unabated', *Africa Confidential* 53 (18) (7 September 2012).

52. IMF, *Regional Economic Outlook*, p. 56.

53. Andrew Walsh, 'After the rush: Living with uncertainty in a Malagasy mining town', *Africa* 82 (2012), pp. 235–51.

54. Jessica Hatcher, 'The white stuff: Mining giant Rio Tinto unearths unrest in Madagascar', *Time* (8 February 2013); Industrial Global Union, 'Mass dismissals at Rio Tinto in Madagascar', 31 July 2013, <<http://www.industrial-union.org/mass-dismissals-at-rio-tinto-in-madagascar>> (19 December 2016).

55. Lovasoa Rabary, 'Madagascar Ambatovy mine workers won't strike, want talks on lay-offs', Reuters (12 June 2015).

56. World Bank, 'Madagascar: Governance and development effectiveness review' (Report No. 54277-MG, Public Sector Reform and Capacity Building Unit Africa Region, World Bank, Washington, DC, 2010), p. xiv.

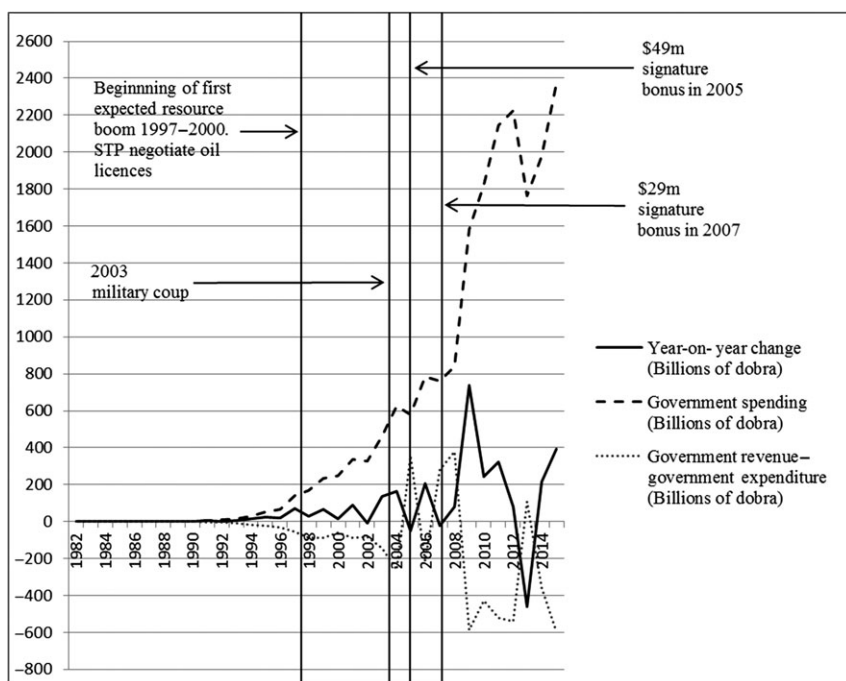


Figure 1 STP government expenditure (billions of dobra), year-on-year change in government expenditure, and government surplus/deficit

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

Note: From 2007–9 STP secured large-scale debt relief from HIPC, MDRI, and the Paris Club. Since this does not reflect revenue that can be spent we have removed this from the budget deficit (dotted line).

Indeed, while STP and Madagascar did not produce any natural resources, both countries obtained sizeable speculative signature bonuses.

In STP, several oil companies – including the US firm Chevron Texaco and China’s Sinopec – paid \$49 million (561.5 billion dobra) in signature bonuses in 2005 and \$29 million (413 billion dobra) in 2007.⁵⁷ This inflow of funds had a considerable economic impact given that signature bonuses represented almost 43 percent of the country’s GDP in 2005, and 20 percent of GDP in 2007.⁵⁸ Despite this windfall, government spending in 2005 and in 2007 actually fell compared to the previous year, as seen in Figure 1. Instead, Figure 1 shows that, with spending having increased to record levels during 2003–4 and 2005–6, the government

57. IMF staff country report 06/349 (IMF, Washington, DC, October 2006).

58. IMF staff country report 12/34 (IMF, Washington, DC, February 2012), p. 6.

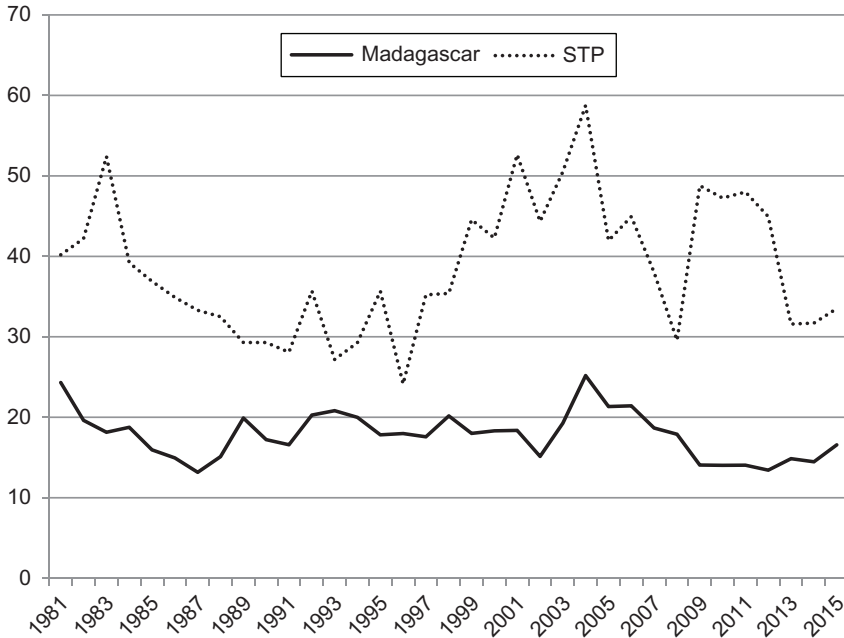


Figure 2 Government expenditure as percentage of GDP

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

deficit was largest in 2004 and 2006 (that is, in the years preceding the windfalls of 2005 and 2007), despite previous praise from the IMF regarding fiscal management in 2002. To provide an idea of the relative scale of the change in government expenditure, Figure 2 shows that since 1996 (the year before the first deal with ERHC) government spending increased from 24.1 percent to a peak of 58.7 percent of GDP in 2004. This evidence is consistent with the argument that high resource expectations fuelled government spending, but Figure 3 also illustrates the relatively high but increasingly volatile economic growth in this period. In Figure 4 we calculate this volatility by measuring the changes in the standard error of growth rates between time periods. A line that is close to the horizontal axis indicates small growth volatility across the decades, something that is considered a desirable macroeconomic objective. For STP, though, we find that the line is volatile across the time period, always well above or below the horizontal.

The period before the first signature bonus of 2005 provides compelling evidence that government spending increased as a result of the prospect of signature bonuses and the not unreasonable anticipation of future oil

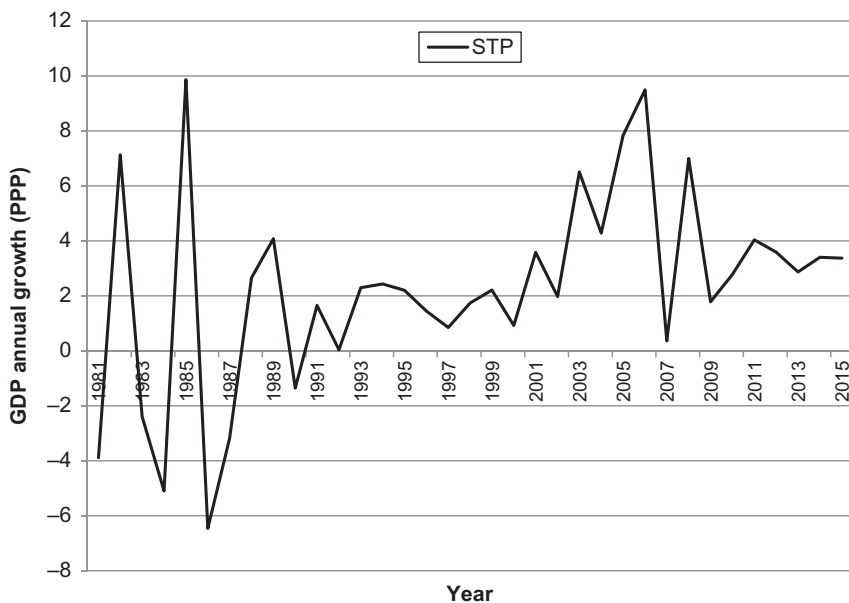


Figure 3 GDP annual growth rates (PPP) in STP (1981–2015)

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

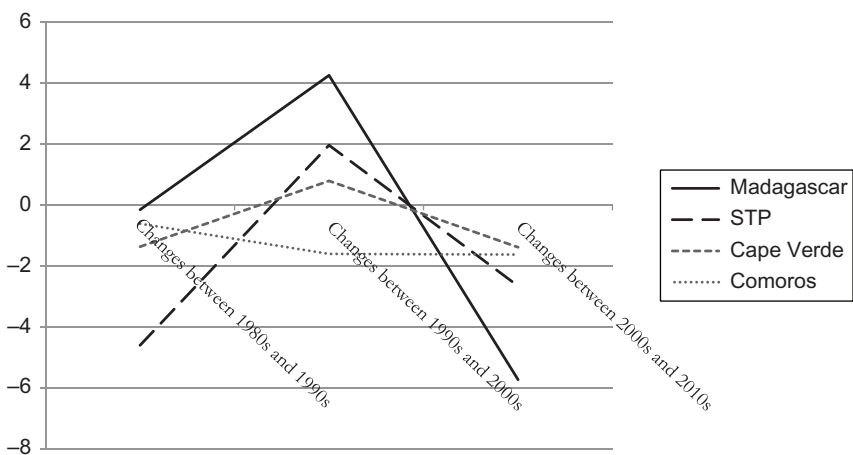


Figure 4 Economic growth volatility changes across the decades

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

revenues. The picture in 2007 is complicated somewhat by STP receiving large-scale debt relief, the expectation of which may potentially have caused some of the increased government spending in 2006. However, while it is hard to know whether expected debt relief results in large increases in government expenditure, we can offer tentative evidence that this is not the case based on the experience of the large debt relief in 2009. Figure 1 illustrates a large increase in spending in 2009 but not immediately before, suggesting that any expected debt relief windfall could not be reallocated before it was received. An obvious explanation is that – in marked contrast to signature bonuses – debt relief came with conditions to adopt sounder fiscal policies and to ensure money was spent on poverty reduction programmes through a poverty reduction strategy paper – and thus political decision makers were less likely to anticipate that these payments would actually materialize.⁵⁹

The large nominal and relative increases in expenditure in 2009 and beyond (seen in Figures 1 and 2) were funded mainly by grants and overseas development aid in capital expenditure in support of the Public Investment Programme. But STP remains vulnerable to debt distress because expected oil revenues have failed to materialize, an outcome signalled by the withdrawal of several large oil exploration companies (the last of which was in 2013). There were large government deficits in five of the six years between 2009 and 2014 as tax revenues declined.⁶⁰ Because this negative outlook for a resource boom has been confirmed relatively recently, as yet it has had no impact on government spending. It is also harder to reduce government spending in the wake of negative resource expectations, an argument supported by extensive scholarship in both economics and political science suggesting that it is considerably more difficult for governments to cut than to increase state spending, especially in politically unstable contexts.⁶¹ Hence some inertia on behalf of the STP government response should be expected.

59. The large increase in government spending stemmed from overseas development assistance in financing the public investment programme to improve infrastructure (telecommunications and transport, for example), education, and health. For more information see the IMF staff country report 14/9 (IMF, Washington, DC, January 2014).

60. IMF staff country report 14/2 (IMF, Washington, DC, December 2013), p. 33.

61. See Alberto Alesina and Guido Tabellini, 'A positive theory of fiscal deficits and government debt', *Review of Economic Studies* 57, 3 (1990), pp. 403–14; Leonardo R. Arriola, 'Patronage and political stability in Africa', *Comparative Political Studies* 42 (2009), pp. 1339–62; Wolfgang Streeck, 'The crises of democratic capitalism', *New Left Review* 71 (2011), pp. 5–29. Alesina and Tabellini note that the limits to the extent to which governments are able to impose government spending cuts are particularly pronounced when politics is more polarized and when a government's grip on political power is more tenuous, with the consequence that government spending cuts become less likely and debt levels will increase commensurately. Conversely, as Arriola points out, governments can buy stability by co-opting key interest groupings. Hence, particularly in unstable political contexts, it is considerably more difficult for governments to cut than to increase state spending.

A comparison between STP and Cape Verde is instructive. Cape Verde is another island economy of similar size that shares a Portuguese colonial history, but lacks any natural resource prospects. Figure 4 demonstrates that growth in Cape Verde was much less erratic (closer to the horizontal) over the same time period, thus offering further support to the idea that false resource-boom expectations can have adverse effects on a country.

In Madagascar, signature bonuses were considerably larger than in STP. For example, the Wuhan Iron and Steel Corporation reportedly made signature bonus payments of \$140 million in 2010 for an iron ore exploration licence.⁶² However, unlike those in STP, signature bonuses in Madagascar were not transparent (see the next section). A closer inspection of government revenue indicates a significant increase between 2009 and 2010, but also shows that the 2009 political crisis resulted in a very steep decline in revenue and expenditure. We conclude that some of this signature bonus is reflected in the 2010 government revenue but that, because of the military coup in 2009, it is not possible to say whether there was an increase in government expenditure prior to 2010 based on an expected windfall and expected resource boom.

In Madagascar the expected sapphire boom contributed to a period of low but sustained economic growth from the mid-1990s to the 2002 political crisis (see Figure 5). Government spending as a share of GDP remained around 18 percent in this period (see Figure 2), and year-on-year changes were modest and flat (see Figure 6), consistent with the fact that the central government had no control over the artisanal mining practices as a source of extracting tax or of attracting signature bonuses. The story is different during the 2000s with the subsequent expected natural resource boom. Between 2003 and 2008 economic growth averaged 6.1 percent, and nominal government spending increased threefold (Figure 6). Government spending spiked from 15 to 25 percent of GDP between 2002 and 2004 and remained over 21 percent until 2008 (Figure 2), consistent with the argument that an expected resource boom triggered both a nominal and a relative increase in government spending. This period also saw an increase in the deficit between government revenue and expenditure. With the resource boom failing to materialize, and in the wake of President Ravalomana's flight from Madagascar in March 2009 following a period of civil unrest, the economy shrank significantly. This coincided with an increasingly large deficit caused by spending increases. Analysing Figure 5 in more detail, it is clear that periods of economic prosperity tend to be followed by a period of uncertainty triggered by social unrest. Expected resource booms may well have contributed to the recent economic and social events in Madagascar. When we analyse

62. 'Miner's missing millions', *Africa-Asia Confidential* 5, 9 (July 2012).

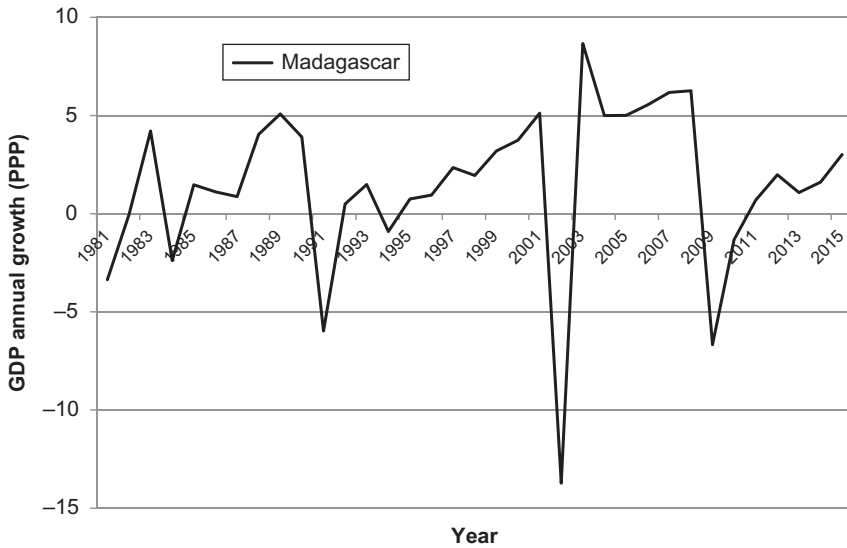


Figure 5 GDP annual growth rates (PPP) in Madagascar (1981–2015)

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

growth volatility (Figure 4), we find this has increased over the decades but is also far more volatile when compared to another neighbouring island economy, namely Comoros.

Ultimately in both countries the prevalence of resource curse effects such as over-optimistic expectations about signature bonuses and other future benefits from a resource boom have contributed to periods of increased government spending and economic growth, but also – as hopes were dashed – to significant shrinkages, worsening deficits, and, to different extents, greater economic and social volatility.

Governance impact of resource boom expectations

Expectations of future natural resources appear to have had an impact on governance in both STP and Madagascar by creating new state institutions. As one author noted with reference to STP, oil administration ‘has become, without a doubt, one of the most developed parts of STP’s public administration today’.⁶³ STP created the Ministry of Natural Resources, the National Petroleum Agency, the Oversight Commission,

63. Weszkalnys, ‘Anticipating oil’, p. 218.

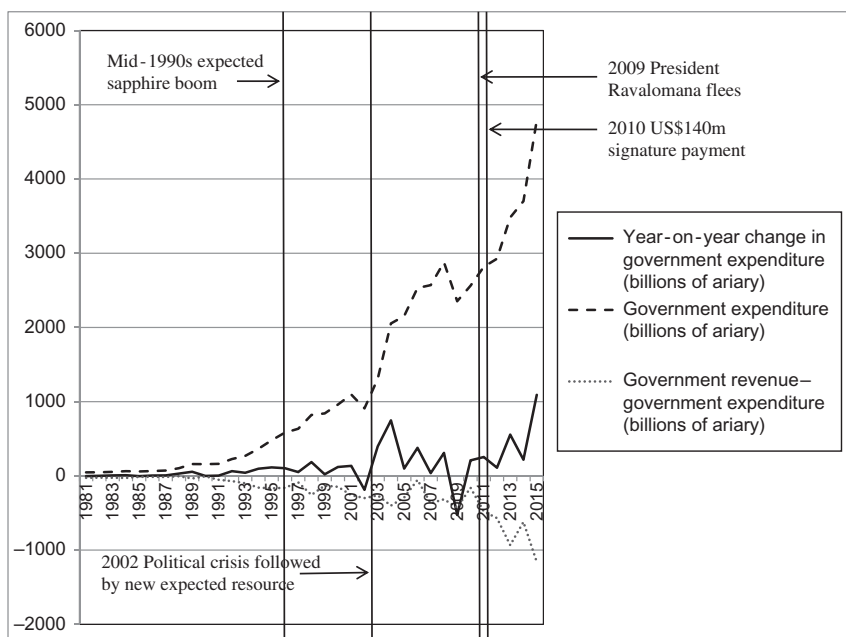


Figure 6 Madagascar government expenditure (billions of ariary), year-on-year change in government expenditure, and government surplus/deficit

Source: World Economic Outlook Database, IMF, <<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/index.aspx>>.

the Public Information Office, and the Joint Development Authority.⁶⁴ Likewise, Madagascar established the Ministry of Mines, the Office of the Mining Cadastre/BCMM, the National Mining Committee, the Office of National Mines and Strategic Industries/OMNIS, and the Mining Police Force.⁶⁵ The creation of these institutions was largely intended to improve the effectiveness and transparency of state institutions charged with overseeing natural resource development. Yet, while these institutions absorbed significant state funding and decision-maker attention in the absence of significant resource extraction, they failed to arrest increasingly unfavourable perceptions of governance in both countries (see discussion of Figure 7 below).

One methodological problem in evaluating the governance impact of resource extraction is the hidden nature of corrupt dealings that may be an integral part of transactions with government but may not be known or

64. *Ibid.*

65. World Bank, 'Madagascar'.

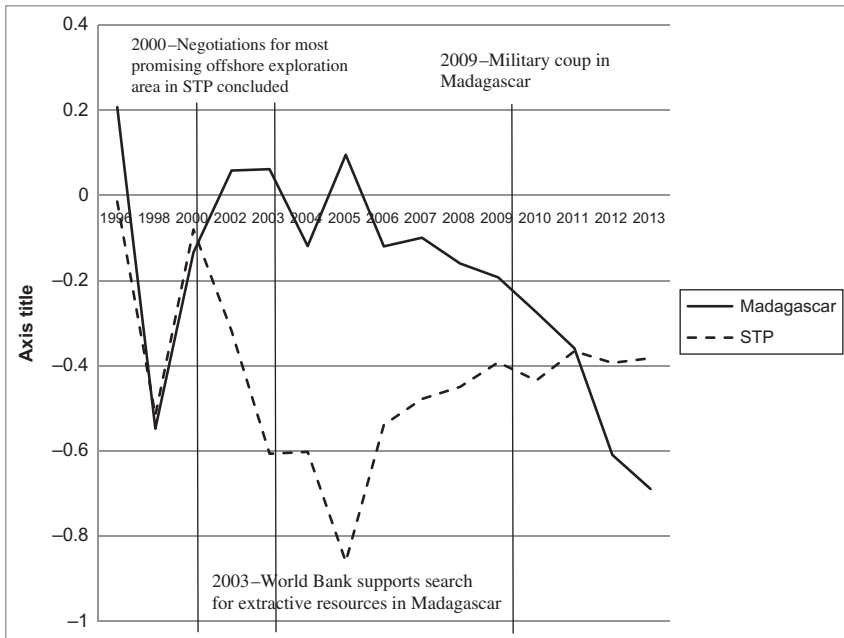


Figure 7 Perceptions of governance in Madagascar and STP

Source: Worldwide Governance Indicators, World Bank.

prosecuted. However, there is an extensive theoretical and empirical literature that explores opportunities for corruption amongst public officials and political incumbents.⁶⁶ Resource inflows, but in particular signature bonuses, offer at least two clear opportunities for corrupt behaviour in public office. First, if there is a competitive bidding process for signature bonuses, then principal-agent problems arise whereby all bidders can be extorted by the political incumbents who grant these bonuses, or corrupt deals are done that benefit both parties. Second, the revenue can be seized by political incumbents who exploit their first-mover advantage, given the risk of being ousted by an opposition grouping using either democratic or undemocratic means.⁶⁷ In other words, incumbents have an interest in

66. For early theoretical work see Susan Rose-Ackerman, *Corruption: A study in political economy* (Academic Press, New York, NY, 1978) and Robert Klitgaard, *Controlling corruption* (University of California Press, Berkeley, CA, 1988). For empirical evidence of government embezzlement and 'kick-back' payments, see for example Ritva Reinikka and Jakob Svensson, 'Local capture: Evidence from a central government transfer program in Uganda', *Quarterly Journal of Economics* 119, 2 (2004), pp. 679–706; Chang-Tai Hsieh and Enrico Moretti, 'Did Iraq cheat the United Nations? Underpricing, bribes, and the oil and food program', *Quarterly Journal of Economics* 121, 4 (2006), pp. 1211–48.

67. Richard Damania and Erwin Bulte, 'Resources for sale: Corruption, democracy and the resource curse' (Centre for International Economic Studies, University of Adelaide, 2005),

exploiting and magnifying expectations in order to maximize their rents, given future uncertainties around their position. Hence, although corruption may increase political instability, the latter is likely to enhance the incentives to be corrupt.⁶⁸

In STP, expectations of future oil resources appear to have had a significant impact on the nature of corruption, as the opportunities for rent seeking and corrupt behaviour among government officials reportedly shifted from a previous focus on foreign aid towards a focus on oil sector payments.⁶⁹ São Tomese politics are characterized by frequent changes in legislative majorities, giving incumbent politicians a strong incentive to maximize rents whilst in office. Writing in 2005, one observer argued that oil prospects in STP opened the risk of elites succumbing to 'the lure of quick and easy money'.⁷⁰ Indeed, one economic study specifically found that corrupt rent-seeking behaviour in STP increased as a result of expectations of a future oil boom, and that there was an accompanying change in the allocation of public resources – for example, by increasing the government's allocation of foreign scholarships, which are regarded as facilitating future political power.⁷¹ Weszkalnys argues that a 'politics of anticipation emerged', testing weak political institutions to their limit, with 'bad oil mapping out its own political space'.⁷² This led to the assembly of 'multiple entities for managing oil' and also suspicion, uncertainty, and instability.⁷³

Already the early choice of the small, unknown firm ERHC as a partner in 1997 was highly controversial, as ERHC was granted the right to four oil blocs of its choice despite being 'on the brink of bankruptcy' and unable to pay the full amount it owed to the government.⁷⁴ ERHC lacked financial resources or the technical expertise to exploit ultra-deep water oil and gas reserves but this was made up for by close ties to prominent politicians.⁷⁵

Following a bitter dispute between ERHC and the STP government, the Nigerian Chrome consortium purchased a controlling interest in ERHC. While the agreement between the government and ERHC was

pp. 1–41; Larry Diamond and Jack Mosbacher, 'Petroleum to the people: Africa's coming resource curse – and how to avoid it', *Foreign Affairs* 92 (September–October 2013), p. 86.

68. Daniel Treisman, 'The causes of corruption: A cross-national study', *Journal of Public Economics* 76, 3 (2000), pp. 399–457.

69. Frynas *et al.*, 'Business and politics in São Tomé e Príncipe'.

70. Glenn Brigaldino, 'Oil boom or bust ahead for São Tomé et Príncipe', *Review of African Political Economy* 32 (2005), pp. 185–97, p. 186.

71. Vicente, 'Does oil corrupt?'

72. Weszkalnys, 'Anticipating oil', p. 217.

73. *Ibid.*, p. 231.

74. Gerhard Seibert, 'São Tomé et Príncipe: The difficult transition from international aid recipient to oil-producer', in Matthias Basedau and Andreas Mehler (eds), *Resource politics in sub-Saharan Africa* (Institut für Afrika-Kunde, Hamburg, 2005), p. 227.

75. *Ibid.*, p. 241.

re-negotiated in 2001, the new agreement was still exceedingly favourable to the Chrome consortium. It included the option to acquire a 15 percent share in two oil blocks of Chrome's choice in the Joint Development Zone and a 100 percent share in two oil blocks in the country's Exclusive Economic Zone without paying any signature bonus, which was most unusual and to the country's disadvantage.⁷⁶ During the licence bidding rounds, STP came under intense pressure from Nigeria to grant a significant amount of the acreage to small, inexperienced Nigerian firms, such as Momo Oil and Godsonic Oil and Gas, which had close ties to the Nigerian presidency.⁷⁷ The Nigerian business interests in STP were accused of major irregularities. For example, the government's most senior public servant declared that he could not find any record of any payments from the Joint Development Zone with Nigeria to the treasury in 2009, despite claims that such payments had been made.⁷⁸

The influx of oil-related payments influenced the wider political process in STP, starting with the 2001 and 2002 elections when Nigerian, Angolan, and Taiwanese interests funded political parties. It is argued that 'vote buying has increasingly become an integral part of electoral competition in the impoverished archipelago',⁷⁹ and more importantly that increased political vote buying was 'indicative of increased competitiveness for state resources' as a result of expectations of a future oil boom.⁸⁰ For example, there were strong allegations that Emeka Offor of Chrome Oil supported President Trovoada's election campaigning by the early 2000s.⁸¹ In general, it is more than a coincidence that 'the prospect of the first petro-dollars coincided with more expensive political campaigning and the entry of new actors'.⁸²

In Madagascar, the governance impact of the first wave of future resource boom expectations was relatively limited due to the artisanal nature of the sapphire sector. As the World Bank observed, in contrast to sectors such as gold and rosewood, where the Malagasy political elites were able to control well-developed networks and capture resource rents, 'sapphire rushes have created open access to rents for newcomers, beyond the control of elites'.⁸³ Most sapphire miners worked without government permits, there were many independent middlemen, and there were many

76. Frynas *et al.*, 'Business and politics in São Tomé e Príncipe'.

77. John Ghazvinian, *Untapped: The scramble for Africa's oil* (Houghton Mifflin, Orlando, 2007), p. 230.

78. 'São Tomé e Príncipe – The candidates line up', *Africa Confidential* 52, 8 (15 April 2011).

79. 'São Tomé e Príncipe – Pinto da Costa back in office', *Africa Confidential* 52, 17 (26 August 2011).

80. Vicente, 'Does oil corrupt?' p. 29.

81. Frynas *et al.*, 'Business and politics in São Tomé e Príncipe'.

82. *Ibid.*, p. 70.

83. World Bank, 'Madagascar', p. 55.

foreign buyers from different countries.⁸⁴ In 1999, the Malagasy government banned the award of sapphire permits, a move that the World Bank dubbed 'an ill-designed decision by a partially blind central state'.⁸⁵ The permit ban lasted until 2005 and further prevented the political elites from controlling the sapphire sector.

The second wave of resource boom expectations from 2003 had a more substantial impact on governance in Madagascar. All access to extractive exploration areas in search of iron, ilmenite, or other resources was regulated by a government-administered permit system. The number of government permits awarded to extractive companies increased from around 30 permits in 2002 to well over 1,300 awarded in 2008.⁸⁶ By 2009, the growth in awarded permits represented some 216,000 square kilometres, or more than 35 percent of Madagascar's total surface area.⁸⁷ In 2008 and 2009, the government reportedly collected revenues of about 10 billion ariary (about \$5 million) from the mining administrative fee.⁸⁸ While this amount is relatively low and one would normally expect much greater revenues from licensing, recent research provides a possible explanation in that sub-optimal separation of powers among government regulators responsible for natural resource licensing may be driving high levels of corruption and rent-seeking opportunities in resource-rich countries. In other words, many payments for licences may have been made as unreported bribes.⁸⁹ Hence, licensing probably represented an increase in rent-seeking opportunities for the Malagasy political elite, even if it is impossible to obtain any tangible evidence of their scale.

Until 2005–6, the permit system was reportedly administered in a relatively transparent manner. By 2006, the World Bank noted that incidents of 'political interference in mining rights management, sometimes in open violation of existing regulations, have called into question the transparent governance of mining rights'.⁹⁰ For example, gold mining rights were awarded by presidential decree to an entity controlled by the military in 2006 under highly dubious circumstances, while the terms of a previously transparent auction for iron ore permits were amended in 2008 and became highly opaque.⁹¹ It would appear that corrupt rent seeking continued following the 2009 coup. As a notable illustration, the Malagasy

84. *Ibid.*, Annex IV.

85. *Ibid.*, p. 112.

86. *Ibid.*, p. 41.

87. *Ibid.*, p. 40.

88. *Ibid.*, pp. 40–1.

89. Luca J. Uberti, 'Is separation of powers a remedy for the resource curse? Firm licensing, corruption and mining development in post-war Kosovo', *New Political Economy* 19 (2014), pp. 695–722.

90. World Bank, 'Madagascar', p. 41.

91. *Ibid.*, p. 42.

government claimed to have received \$100 million from the Wuhan Iron and Steel Corporation in 2010, but the Chinese company later protested that they actually paid \$140 million.⁹² Indeed, the 2009 coup represented a transition from a Malagasy state dependent on foreign aid (almost 70 percent of government revenues in 2008) towards a reliance on rent-seeking opportunities related to natural resources and future expectations of natural resource booms, given that international aid to Madagascar was mostly frozen following the coup. The World Bank commented in 2010 that 'by limiting the need for revenue collection e.g. through taxation, mining revenues risk further weakening the accountability of the Malagasy state to its citizens and further undermining the capacity of state institutions'.⁹³

In both countries, it is clear that the prevalence of resource curse effects on governance was already apparent before either country started producing any significant resources. Governance indicators presented in Figure 7 corroborate this story. These indicators show that for both Madagascar and STP governance has always been perceived as poor but certainly worsened from around the onset of expectations of future resource booms: after 1997 in STP and after 2003 in Madagascar. There were obvious differences between both countries owing to their different historical and political trajectories. With regard to STP, the 'strong social bonds [within the small elite of the country] and pressures and the absence of a large number of groups for sharing the pay-offs made plunder more feasible'.⁹⁴ In contrast, the political elite in Madagascar was broader and considerably more prone to violent intra-elite conflicts (see section below). However, while there were different mechanisms of conflict and accommodation in STP and in Madagascar, perceptions of corrupt rent-seeking behaviour appear to have increased in both countries as a result of expectations of future resource booms.

In recent years, however, there was a divergence of expectations in the two countries. In Madagascar, expectations of future resource booms increased and were partly confirmed by the actual presence of Ambatovy and Rio Tinto (see above). The accountability of government institutions further diminished, as demonstrated most notably by the removal of the *de facto* authority of the Office of the Mining Cadastre/BCMM (an arm's-length agency under the authority of the Ministry of Mines) by the executive branch of Madagascar's government after 2009. In marked contrast in STP, expectations of future resource booms declined after disappointing results from deep-sea oil explorations. These factors led to the

92. 'Miner's missing millions', *Africa-Asia Confidential* 5, 9 (July 2012).

93. World Bank, 'Madagascar', p. xiv.

94. Frynas *et al.*, 'Business and politics in São Tomé e Príncipe', p. 77.

departure of major foreign oil companies Exxon, Chevron, Sinopec, and finally Total in 2013. The 2014 IMF staff country report on STP praised the new coalition government that came into office in December 2012 for 'the pursuit of sound financial policies' in the face of 'more uncertain oil prospects', pointing to their commitment to fiscal prudence and a series of undertaken and planned financial reforms related to fiscal administration improvement, tax payments, and bank transparency, among other concerns.⁹⁵ In other words, the decreased expectations in STP appear to have forced the STP government to initiate fiscal reforms and to focus on non-oil sectors. These recent developments can help to explain the divergent perceptions of governance in the two countries from the late 2000s: a deterioration of governance as perceived in Madagascar, and a slight improvement in STP (see Figure 7).

Conflict impact of resource boom expectations

Natural resource booms raise political stakes and arguably create a distinct 'political ecology'.⁹⁶ If, as noted above, politicians and government officials in unstable political environments have a greater incentive to capitalize on their first-mover advantage through corruption, opposition factions have greater incentives to seize power and may issue promises to excluded commercial interests in return for support. Indeed, a 2010 study by Päivi Lujala found that oil and gas reserves, whether exploited or not, can worsen conflicts, as competing players seek to mould or pre-empt the consequences of future distributions.⁹⁷

Our findings show that expectations of future resource booms only started to exert impacts on political decision making in STP from the late 1990s and in Madagascar after 2003. One could make a counter-factual argument that it was precisely because resource expectations were low before the late 1990s that peaceful democratization was possible in both countries. Echoing previous well-known findings by Michael Ross that petroleum exports are strongly associated with authoritarian rule,⁹⁸ research by Nathan Jensen and Leonard Wantchekon found a negative correlation between the presence of a sizable natural resource sector and the level of democracy in Africa. They concluded that post-Cold War democratic reforms in Africa have been successful only in resource-poor countries such as Benin, Mali and Madagascar.⁹⁹

95. IMF staff country report on STP 04/108 (IMF, Washington, DC, April 2004).

96. Le Billon, 'The political ecology of war'.

97. Lujala, 'The spoils of nature'.

98. Michael L. Ross, 'Does oil hinder democracy?', *World Politics* 53 (2001), pp. 325–61.

99. Nathan Jensen and Leonard Wantchekon, 'Resource wealth and political regimes in Africa', *Comparative Political Studies* 37 (2004), pp. 816–41.

Following this argument, given that both STP and Madagascar lacked a sizeable natural resource sector, one would expect them to be potentially more stable and democratic than resource-rich countries in Africa. Indeed, it has been observed that the political competition in STP was extremely peaceful until the 1990s and ‘even the military coup in 1995 was a mostly bloodless event and was quickly resolved in a peaceful manner, ending with the restoration of civilian rule’.¹⁰⁰ Madagascar experienced more violent conflicts, most notably the 2002 stand-off between the two presidential candidates Ravalomanana and Ratsiraka, which saw the emergence of rival militias that engaged in sporadic violence. But the 2002 crisis ended peacefully with a return to the rule of law and democracy, and it was pointed out at the time that Madagascar’s rulers had strong incentives to sustain political stability and to base the country’s wealth creation on ‘the low cost of labour’, given that ‘Madagascar possesses few strategic commodities’.¹⁰¹

Following the logic of the resource curse, the expectations of future resource booms should have introduced a distortion of the political landscape by raising the stakes of political competitions, as the political actors expected to obtain access to natural resource rents in future. In particular, one would anticipate that future expectations would have played an important role in major disturbances: the 2003 coup in STP and the 2009 coup in Madagascar. The 2003 coup in STP was primarily a direct response to non-oil related factors, above all, a small group of highly trained ex-soldiers facing economic hardship and poor pay and working conditions in the São Tomean army. It was no more violent than the previous 1995 coup, which happened before the rise of future oil expectations.¹⁰² However, while natural resources were not the main driving force, the coup reflected, at least in part, a product of interest in potential oil revenues, the prospects of easy wealth, and the belief that a few senior politicians had bought luxury cars for their secretaries and children, whilst most remained poor.¹⁰³ The expectations of a future oil boom also influenced the timing of the coup, given that ‘the rebels wanted to denounce the unequal distribution of the country’s resources before the oil revenue arrived’, and they were aware of the ‘possibility that, after the arrival of the first petrodollars, the government would be able to buy off any potential opposition’.¹⁰⁴

100. Frynas *et al.*, ‘Business and politics in São Tomé e Príncipe’, p. 78.

101. Randrianja, ‘“Be not afraid, only believe”’, p. 329.

102. On the 2003 political crisis, see Gerhard Seibert, ‘The bloodless coup of July 16 in São Tomé e Príncipe’, *Lusotopie* (2003), pp. 245–60.

103. Ghazvinian, *Untapped*, p. 227; Afrol News, ‘São Tomé coup is over’ (23 July 2003), <<http://afrol.com/articles/10323>> (19 December 2016).

104. Seibert, ‘The bloodless coup of July 16’, p. 260.

The coup plotters' demands also provide indications that the 2003 coup was at least partly motivated by the greed associated with oil-related rent seeking in STP. Daunted by the challenges of political power, the coup plotters stepped down one week later in return for an amnesty and an agreement which they signed with the government. The agreement largely reflected the economic demands of the soldiers involved; significantly, 'political demands were either absent or remained rather vague'.¹⁰⁵ Among other concessions, the agreement provided the army's supreme command with access to information about the oil sector. According to a well-informed São Tomé expert, 'this provision reflected both the military's concerns regarding the lack of transparency with regard to the oil sector and their intention to participate in the expected oil rush'.¹⁰⁶

The 2009 coup in Madagascar in which soldiers seized key sites and installed the mayor of Antananarivo, Andry Rajoelina, as the country's president was primarily a direct response to non-oil related factors. In particular, it was driven by a mutiny among dissatisfied soldiers and a long-standing conflict between Rajoelina and the country's president, Marc Ravalomanana.¹⁰⁷ However, government actions after 2009 provide indications that the prospects of natural resources provided strong incentives for the coup leaders to cling to power, particularly given reduced overseas aid. As one of its first notable policy decisions following the coup, the new government relieved BCMM of the *de facto* authority to allocate extractive permits, which henceforth were granted directly by the executive branch of the government through the Minister of Mining. Furthermore, in January 2010, the Ministry of Mines passed a decree that doubled the level of mining administration fees, in violation of the country's mining code.¹⁰⁸ While ultimately we cannot know how important future natural resource revenues were in the decision-making process, these actions provide clear evidence that the coup leaders anticipated future resource income. According to the World Bank, 'commitments within the dominant elite coalition are fluid and unstable, shocks can easily lead to violence and the rise of new coalitions'.¹⁰⁹

In summary, natural resources were not necessarily the primary motives for the coups in STP and in Madagascar; the motives for coups were inevitably complex and we do not have any solid evidence on the perceptions of actors involved in the conflicts. Nonetheless, there are indications that first-mover incentives in anticipation of future resources have, at least

105. *Ibid.*, p. 257.

106. *Ibid.*

107. On the 2009 political crisis, see Solofo Randrianja, *Madagascar, le coup d'état de mars 2009* (Karthala, Paris, 2012).

108. World Bank, 'Madagascar'.

109. *Ibid.*, p. xviii.

partly, fuelled the activities of potential coup leaders and other violent forms of political opposition, as predicted by the resource curse thesis. At this point, while we still need to be cautious about our conclusions on the link between future expectations and conflict, there are first-mover incentives for power seekers who are able to issue 'promissory notes' to commercial interests seeking to gain minerals concessions in times of resource hype, and, in turn, are able to secure greater financial muscle in support of their endeavours.

Conclusions

We do not hold a deterministic view of resource curse effects. We do not argue that resource curse effects are inevitable, and there is important counter-evidence in the case of some countries and for specific periods of time.¹¹⁰ On the one hand, the quality of societal governance may help to reduce resource curse effects – by reducing the scope for corruption, for example.¹¹¹ On the other hand, government policies have the potential to reduce resource curse effects.¹¹² A recent study in this journal suggested that Ghana may possibly combine both a good quality of societal governance and skilful government policies that will help to shield the country from resource curse effects.¹¹³ At the same time, there is evidence not only that historically high and volatile commodity markets are associated with greater speculative activity, but also that the effects of the resource

110. Mehlum, Moene, and Torvik, 'Institutions and the resource curse'; Robinson, Torvik, and Verdier, 'Political foundations of the resource curse'; Alexeev and Conrad, 'The elusive curse of oil'; Haber and Menaldo, 'Do natural resources fuel authoritarianism?'

111. Studies show *inter alia* that free media, a strong civil society, or transparency in revenue and expenditure flows reduce the scope for corruption and waste, as well as the scope for generating political budget cycles. Timothy Besley and Andrea Prat, 'Handcuffs for the grabbing hand? Media capture and government accountability', *American Economic Review* 96 (2006), pp. 720–36; Paul Alexander Haslam, 'Overcoming the resource curse: Reform and the rentier state in Chile and Argentina, 1973–2000', *Development and Change* 47 (2016), pp. 1146–70; James E. Alt and David Dreyer Lassen, 'Fiscal transparency, political parties, and debt in OECD countries', *European Economic Review* 50 (2006), pp. 1403–39. See also Mehlum, Moene, and Torvik, 'Institutions and the resource curse'.

112. For example, government policies can insulate the economy from resource curse effects by creating a 'revenue stabilization' or 'savings fund', or can help to diversify the country's economic base by investing in non-resource sectors. Paul Stevens, 'Resource curse and how to avoid it', *Journal of Energy and Development* 31 (2005), pp. 1–20; Stella Tsani, 'On the relationship between resource funds, governance and institutions: Evidence from quantile regression analysis', *Resources Policy* 40 (2015), pp. 94–111; Jędrzej George Frynas, 'Sovereign wealth funds and the resource curse: Resource funds and governance in resource-rich countries', in Douglas Cumming, Igor Filatotchev, Juliane Reinecke, and Geoffrey Wood (eds), *The Oxford handbook of sovereign wealth funds* (Oxford University Press, Oxford, forthcoming 2017). See also contributions in Macartan Humphreys, Jeffrey D. Sachs, and Joseph E. Stiglitz, *Escaping the resource curse* (Columbia University Press, New York, NY, 2007).

113. Dominik Kapiński, Andrzej Polus, and Wojciech Tycholiz, 'Resource curse or resource disease? Oil in Ghana', *African Affairs* 112, 449 (2013), pp. 583–601.

curse have worsened since the early 1990s.¹¹⁴ The long energy transition, in turn, has offered particular encouragement to financially reckless behaviour around the possibility of future petroleum windfalls, with a potential impact on countries and how they are governed.¹¹⁵

We have found that both STP and Madagascar have experienced at least some resource curse effects, even without the actual exploitation of substantial resources. The resource curse effects were most evident with regard to economic and governance issues, including volatile economic growth and deteriorated governance. In other words, our findings suggest that it is indeed possible to experience at least some dimensions of the resource curse as a result of excessive hype. The propensity for breathless announcements by the extractive industries of massive natural resource prospects that rarely live up to their initial promise may thus have far more malign effects than those visited on gullible investors and creditors.

Past empirical research focused almost exclusively on the tangible presence of natural resources and a country's dependence on natural resource income or exports as key indicators; it neglected the importance of future expectations. Future studies may fruitfully develop research methodologies for measuring expectations and comparing them between different localities: this would account more accurately for the variability of resource curse effects between countries and help provide recommendations on how to reduce resource curse effects.

114. Wood and Lane, 'Institutions, change and diversity'; Lane and Wood, 'Capitalist diversity'; Gail Tverberg, 'Oil supply limits and the continuing financial crisis', *Energy* 37 (2012), pp. 27–34; Andersen and Ross, 'The big oil change'.

115. Heinberg, *Snake oil*; Kotze, 'Debt, defaults and crises'.